

ABSTRACT

A non-volatile memory, which comprises an insulating substrate (11) that has a first electrode (18) that extends through the substrate from the front surface to the rear surface thereof; a second electrode (13) that is formed on one side of the insulating substrate (11); and a recording layer (12) that is clamped between the first electrode (18) and the second electrode (13) and whose resistance value varies when an electric pulse is applied across the first electrode (18) and the second electrode (13); wherein the insulating substrate (11) has a layered structure composed of an organic dielectric thin film (112) and an inorganic dielectric layer (111) that is thinner than the organic dielectric thin film (112); with the recording layer (12) being formed on the side on which the inorganic dielectric layer is formed. Use of this non-volatile memory increases the possible number of data writing cycles while saving power.